

Claim 43- Page 6, Lines 27-32; Page 10, Lines 3-9.

Claim 44- Page 6, Lines 27-32; Page 10, Lines 3-9.

Claim 45- Page 11, Lines 25-30; Page 18, Lines 30-36.

Claim 54- Page 23, Lines 1-11.

Upon entry of the amendments presented, Claims 1-55 remain in the application. An additional claims fee of \$426.00 is due as a result of these amendments. Authorization is given in the cover sheet to charge this additional claims fee to the Assignee's deposit account.

Invention Synopsis

The present invention is directed to flowable nondigestible oil compositions comprising a liquid polyol fatty acid polyester having a complete melt point of less than about 37° C., and a crystallized solid polyol fatty acid polyester having a complete melt point of at least about 37° C. The solid polyol fatty acid polyester comprises a plurality of crystallized particles, and preferably includes a solid saturated polyol polyester, within the liquid polyol fatty acid polyester component. The flowable, nondigestible oil compositions have a Consistency (K) within the temperature range of 20° C to 40° C of less than about 600 P.sec⁽ⁿ⁻¹⁾. The compositions of this invention are capable of being handled and stored in a flowable state at room and ambient storage temperatures, thereby avoiding the necessity of exposing the compositions to high temperatures (generally greater than 50° C.) which would otherwise be required to make such compositions flowable. The ability to use ambient handling and storage conditions for the compositions herein tends to minimize the effects of heat and high temperatures on the chemical stability of the polyol fatty acid polyester, which results in greater oxidative stability and flavor stability during extended storage of both the nondigestible oil compositions herein and the food products containing the nondigestible oil compositions.

The present invention is also directed to a process for making flowable nondigestible oil compositions. The process comprises the steps of (1) completely melting the nondigestible oil composition containing the solid polyol fatty acid polyester and the liquid polyol fatty acid polyester, (2) crystallizing the solid polyol polyester into a plurality of crystallized particles, preferably in two crystallization steps or stages; and (3) shearing the polyol polyester composition during the step of crystallizing the solid polyol fatty acid polyester within the liquid polyol polyester component.

Restriction Requirement

The Examiner has applied a restriction requirement between the composition and process claims in the instant application. Before specifically discussing the substance and propriety of the restriction requirement, Applicants would generally note two apparent errors made by the Examiner in applying this restriction requirement.

In the first place, the Examiner has apparently inadvertently included an inappropriate paragraph (Paragraph No. 3 in the instant Office Action, Paper No. 7) which refers to restriction

between method-of-making and method-of-using claims. There are no method-of-use claims in the claims groups identified or in the application, and it is believed that the appropriate discussion of the basis for the restriction requirement is instead found in the Examiner's Paragraph No. 4 of the instant Office Action (Paper No. 7).

Secondly the Examiner indicates that the provisional election made by the Applicants' attorney on May 14, 1999 was made "without traverse." Applicants' attorney's notes and recollections, however, indicate that the Examiner's conclusion in this regard is in error. The May 14, 1999 provisional election was made by Applicants' attorney with traverse, and the restriction requirement now applied is, in fact, respectfully traversed herein.

The Examiner has subjected the present application to a restriction requirement under 35 USC § 121 by identifying the following two claim groups:

Group I. Claims 1-19, drawn to a flowable nondigestible oil composition, classified in class 514, subclass 23.

Group II. Claims 20-40, drawn to a process for making a flowable nondigestible oil composition, classified in class 536, subclass 124.

The Examiner justifies restriction as set forth on the basis that the "process as claimed can be used to make materially different products such as polyesters of monosaccharides, disaccharides, trisaccharides, tetrasaccharides, and sugar alcohols," and on the basis that the claim groups have acquired a separate status in the art. Applicants respectfully submit that neither of these stated bases for restriction is accurate or correct.

In the first place, the polyesters of the several sugars listed by the Examiner are all within the scope of both the instant composition and process claims. Rather than exemplifying "different" materials made by the claimed process, the listed sugars simply confirm that the scope of the composition and process claims herein is the same.

In the second place, Applicants submit that the prior art search set up for Group I (product) should be coextensive with any search for Group II (process) because the novel combination of elements, *vis a vis* the art, is identical between the Groups I and II. Thus applicants respectfully submit that searching the two claim groups together would present no undue burden for the Examiner. MPEP § 803 in fact, states that if "the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions." Importantly, this MPEP section is directly applicable to the situation at hand since the Examiner has already examined both the composition and process claims on their merits and has rejected both composition and process claims over the same art. (See the August 27, 1998 Office Action in the instant application.) If the objective in imposing restriction is to avoid an undue searching burden for the Examiner, then such a restriction requirement should be made before both claim groups are concurrently searched, not after.

Given the foregoing considerations, Applicants submit that the restriction requirement in this case is improperly and inappropriately applied and should be withdrawn. However, in the event the Examiner's restriction requirement is made final, Applicants reaffirm the provisional election, which

was made with traverse in a May 14, 1999 telephone interview with the Examiner, to prosecute the invention of Group I (Claims 1-19 and newly added Claims 41-54) holding Group II (Claims 20-40 and newly added Claim 55) in abeyance under the provisions of 37 CFR § 1.142 (b) until final disposition of the elected claims.

Formal Matters

Claims 1, 2, 4 and 7-12 have been rejected under 35 U.S.C. § 112, Second Paragraph, as being indefinite with respect to the terms "at least about" (all occurrences) and "less than about" (all occurrences). Applicants respectfully traverse this rejection.

The terms "less than" and "at least" are conventionally employed to set one end of an open-ended range. They clearly denote a "maximum" and a "minimum" to the reader. The term "about" is conventionally used in U.S. patent claim language and has been held to be not indefinite if the parameter being described is not inherently relatively imprecise. [Cf. Amgen, Inc. v. Chugai Pharmaceutical Co., 18 USPQ 2d 1016 (CAFC, 1991) and W.L. Gore & Assocs., Inc. v. Garlock, Inc., 220 USPQ 303 (CAFC, 1983).] In the instant situation, the parameter being quantified is temperature in °C which is a parameter capable of relatively precise determination. The case law would therefore tend to uphold the propriety of the "about" language in the situation at hand.

Given the state of the law and the nature of the parameters involved, it is respectfully submitted that the terms "less than about" and "at least about" as applied to temperature ranges in Applicants' claims would be quite clear and definite to the skilled artisan working with nondigestible fats and oils of the type herein involved. Accordingly, the Section 112 rejection of the claims based on the use of these terms in this particular context is improper and should be withdrawn.

Art Rejections

Claims 1-19 have been rejected under 35 USC §103 as unpatentably obvious over Elsen et al (U.S. Patent No. 5,422,131). The Examiner contends that it would have been "obvious to one of ordinary skill in the art having the Elsen et al patent before him to obtain the instant claimed nondigestible composition in view of their closely related structures and the resulting expectation of similar organoleptic properties for food prepared with the nondigestible compositions." Applicants respectfully traverse this rejection.

As acknowledged by the Examiner, the nondigestible composition encompassed by the instant claims "differ from the nondigestible composition disclosed in the Elsen et al reference in the recitation of the compositions having 'a Consistency in a temperature range of 20-40°C of less than about 600 P.sec⁽ⁿ⁻¹⁾' which is not recited in the Elsen et al. patent." The Examiner incorrectly states, however, that "this difference does not appear to be of patentable moment and may be within the scope of the nondigestible composition of the Elsen et al patent."

The Elsen et al patent discloses a nondigestible fat composition which, though comprised of a liquid component and a solid component, is substantially solid at ambient and room temperatures. The Elsen et al reference is intended to provide a nondigestible fat composition which when used as a

replacement for conventional fats and oils in finished food products effectively eliminates the problem of passive oil loss while maintaining suitable organoleptic properties. The solid portion of the Elsen et al composition, when cooled rapidly under quiescent conditions (without shearing) in accordance with the Elsen disclosure, forms crystallized platelet-like structures that aggregate or cluster together. It is believed that because of their porous nature, these aggregated crystallized platelets bind a portion of the liquid component of the nondigestible fat composition, thereby providing the effective passive oil loss protection.

As the Elsen et al composition is further cooled under quiescent conditions in accordance with the teachings of the Elsen et al reference, the aggregated crystallized platelets connect to each other forming a crystalline matrix that binds the remaining portion of the liquid component of the nondigestible fat composition. This crystalline matrix provides sufficient structure to the nondigestible Elsen composition such that the Elsen nondigestible composition is substantially solid at room and ambient storage temperatures.

Notwithstanding the similarity between the starting components used in the present invention and the components of the Elsen et al reference, the compositions of the present invention are intended to solve a different problem, are prepared using a different method, and have different physical characteristics and properties as a result.

The nondigestible fat compositions of the Elsen et al reference are intended to solve the problem of passive oil loss while maintaining acceptable organoleptic properties. On the other hand, the present compositions would provide little, if any, effective passive oil loss control. (The present compositions, of course, do provide passive oil loss control once they are remelted and crystallized in accordance with Elsen during the preparation or cooking processes for foods containing them.) Rather, the present invention is intended to provide a nondigestible oil composition which prior to its use, is flowable at room or ambient storage temperatures, thereby increasing productivity and safety during the intermediate stages of food production using the nondigestible oil composition.

The nondigestible oil composition of the present invention is made flowable through the application of mechanical shear applied during the cooling process that forms the crystallized particles of requisite size. As the nondigestible compositions herein are cooled during composition formation, a portion of the solid component solidifies into crystallized particles. A portion of these crystallized particles then cluster together forming aggregated crystallized particles. Mechanical shear is applied to the nondigestible composition as cooling continues. The application of mechanical shear encourages the formation of smaller, rather than larger, aggregated crystallized particles by breaking apart the larger aggregations. The application of mechanical shear additionally inhibits the clustering of these aggregated crystallized particles and prevents the formation of the crystalline matrix that gives the nondigestible fat compositions of the Elsen et al reference sufficient structure so as to be substantially solid at room and ambient temperatures.

As the nondigestible oil compositions made in accordance with the present invention do not form a crystalline matrix sufficient to bind the liquid component of the nondigestible compositions, the compositions herein remain flowable when cooled to room and ambient storage temperatures. These

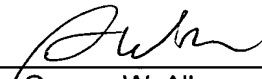
nondigestible oil compositions will remain flowable during transportation, storage, and use until they are returned to a completely molten state then rapidly cooled under quiescent conditions, such as in the final stages of food production.

Given the foregoing considerations, it is respectfully submitted that the Elsen et al. reference does not teach or obviously suggest the essential elements of Applicant's flowable nondigestible oil compositions or the processes of making the same. Accordingly, rejection of Applicants Claims 1-19 over this reference under 35 USC §103 is improper and should be withdrawn.

Conclusions

Applicants have made an earnest effort to place their application in proper form, to establish the unity of their claimed invention, and to distinguish their claimed invention from the applied prior art. WHEREFORE, reconsideration of this application, entry of the amendments provided, withdrawal of the restriction requirement, withdrawal of the rejections under 35 USC §112 and 35 USC §103, and allowance of Claims 1-55 are respectfully requested.

Respectfully submitted,
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